

Amendments to the Specification:

Please replace the paragraph [0078] with the following rewritten paragraph:

[0078] A "compound" can be any agent, composition, or molecule that affects the activity of AI-2 or affects the activity of a protein that binds with AI-2. For example, a compound of the invention can be a nucleic acid, a protein, an analog of AI-2 or small molecule. A "compound" includes molecules that regulate the autoinducer-2 receptors, such as LuxP or LuxQ. For example, a compound of Structure I, II, III or IV can regulate the activity of a LuxP protein, a LuxQ protein, a LuxP-LuxQ complex, a LuxP-AI-2 complex, or a LuxP-LuxQ-AI-2 complex, such that bacterial growth or the expression of an extracellular virulence factor is regulated. Such compounds include inhibitors that interact directly with AI-2 such that AI-2 is prevented from acting as a signaling factor sensor for quorum-sensing Signal System-2. For example, a compound of the invention could interact directly with 4,5-dihydroxy-2-cyclopenten-1-one or 4-hydroxy-5-methyl-2H-furan-3-one.